

## **Nuclear Disarmament**

### Summary

There are currently more than 15,000 nuclear weapons in the world (2). 90% of these are controlled by USA and Russia, with the rest distributed between seven countries (2). These countries are modernising and upgrading these weapons, which actively violates current international treaties.

In the case of a small nuclear war between India-Pakistan, where only 30 weapons are used by each state, 30 million people would die in the first week. Moreover, in the ensuing climate disruption and nuclear winter that would follow the event, world food production would be severely disrupted, causing 2 billion to die in a global famine.

If one 20-megaton bomb was dropped, in a 4 mile radius everything would be vaporised as temperatures reach 20 million degrees Fahrenheit. Winds would reach 600mph for 6 miles in each direction, for 16 miles in each direction anything flammable would burn; and a firestorm that would burn over 800 square miles. The consequence of a major war, where these bombs are dropped on major cities around the world would risk the extinction of the human race. Soot would enter the atmosphere and block the sun, and temperatures would drop by 50 degrees in parts of North America and Eurasia, to the coldest in 18,000 years - temperatures unseen on earth since the Ice age.

Current nuclear policy such as nuclear proliferation treaty has failed over the past 50 years to reduce the threat of nuclear war. A new strategy was developed by civil society in 2010 to advocate a complete ban, and since civil society and a range of governments have worked on a UN treaty ban on nuclear warfare. Similar to other forms of weapons of mass destruction, such as biological and chemical weapons, that have a disregard for civilian life; the treaty proposes nuclear weapons to be completely banned. This was opened for signature on 20th September, but the United Kingdom has not signed this treaty. This policy seeks to give impetus for Students for Global Health to campaign with other civic organisations to make the UK sign the treaty. Students for Global Health has a powerful platform to mobilise the youth movement against nuclear warfare.

### Background

#### 1. Nuclear Weapon Ban Treaty

On July 7th 2017 122 countries voted to adopt the treaty on the Prohibition of Nuclear Weapons. It prevents the production, testing, development, stockpiling, transferring, ownership, threat and use of nuclear explosive devices. Furthermore, it prevents countries from having another country's nuclear weapons within its borders. The treaty states that all operational nuclear weapons will be made non-operational and destroyed in a time-bound and safe manner. Victim assistance and humanitarian aid will be provided without discrimination to those who have been affected by nuclear weapons use and testing; as well as providing environmental remediation to the areas affected. This treaty opened for signature on 20th September 2017, and it will potentially take years for the treaty to reach the necessary 50 signatures to become international law. Once a country has signed the treaty they must ratify it i.e. change their national law to

include the Nuclear Ban within it. This is the reason for the delay for inclusion in international law.

There is opposition to the treaty from all 9 states who possess nuclear weapons (India, Pakistan, N. Korea, USA, UK, France, Russia, China and Israel) as well as their allies and nuclear dependant states. They would rather support and update current nuclear weapons legislation such as the non-proliferation treaty (NPT); which partially curtails some specific nuclear weapons and nuclear-free-zone treaties which prevent the stationing of nuclear weapons in certain regions. However, these treaties have failed in reducing the threat of nuclear war, as tensions continue in geopolitical hotspots such as India-Pakistan and North Korea-USA. Furthermore, nuclear free zone regions; such as the South American and African continents recognise that nuclear weapon technology will have devastating consequences for them regardless of whether they are nuclear free.

Most states see the aims of the non-proliferation treaty as a very long term goal, therefore they have engaged in practices to modernise and upgrade weapons, spending billions of dollars (2). This violates the spirit of the non-proliferation treaties, and is an example of how they have failed in their objective.

Within the countries with nuclear arms, there is a distinction between the first 5 states who had access (China, USA, Russia, France and the UK) and the others. The former's possession is generally seen as tolerable whereas possession by any other state is seen as a threat to international peace and security (2). This is completely discriminatory, paternalistic, and goes against the concept of equality of states (2).

The rationale for nuclear weapons include maintaining prestige, preventing nuclear war, security guarantees and use as a bargaining chip in foreign policy (2).

## 2. Climate Disruption and Nuclear Famine

A war fought using 5% of the global nuclear stockpile would leave the planet uninhabitable (3). A small regional war would risk food systems and affect livestock; resulting in the depletion of marine life and the blinding of many animals by the ensuing UV radiation. A NASA study suggested that the nuclear winter caused by a small nuclear war would cool the world by up to 25-30 degrees celsius for over 10 years.

Changes in precipitations, solar radiation, growing season length and drops in temperature would have a devastating effect on grain growth. A drop in food production has knock on effects on consumption. Lower availability will lead to prices rise, which means the amount of people unable to afford the daily recommended amount of food increases. This is felt most deeply by those who are already struggling to obtain enough food in our inequitable world. In previous agricultural food production drops, such as the Bengal Famine in 1943, the 5% fall in crop production led to 3 million people dying. The effects of a nuclear famine would be incomparable. Moreover, the effects would be amplified by the likely self-interested behaviour of world powers. Grain hoarding in the countries that produce the most such as the USA would leave grain import dependent countries in North Africa and the Middle East extremely vulnerable. Currently, famine is also linked to epidemics in infectious diseases, and outbreaks of

violence and civil conflict (4). It is highly likely that a nuclear famine would trigger the same consequences.

### 3. Effects on Health

Many British Army Veterans and Australian aboriginals live with the dire consequences of Britain's nuclear weapon testing in the 20th century. The Prohibition of Nuclear Weapons would force countries to support those affected by nuclear testing, something the UK government currently refuses to do.

The effects on health can be summarised under blast, heat and radiation. Blasts shockwaves kill people immediately if they are close enough, but people outside the immediate radius will have burst ear drums, ruptured lungs and internal bleeding. Buildings and other infrastructure will collapse due to the shockwaves, collapsing on people and causing traumatic injuries. Heat vaporizes those closest to the epicentre and causes flammable objects further away to set alight; causing extreme burns. In the immediate aftermath of Hiroshima, over 90% of the health workforce was killed. 42 of the 45 hospitals were rendered non-functional. This meant there was nowhere for the severe burns victims to go, and no specialists to treat them. In the event of a nuclear war, there will be no humanitarian response. The long term effects of radiation exposure are predominantly cancerous, mainly leukemia, with some thyroid, breast and other cancers. There are consequences for pregnant women; including increased miscarriages and fetal malformations. Radiation will also enter the soil and plants around the bomb site, leaking into the food systems of future inhabitants; causing long term internal radiation damage in the future (5).

### Stance, Strategy and Recommendations

Therefore, Students For Global Health's stance is:

- A nuclear war on any scale would be disastrous for the human race.
- Current nuclear policy is ineffective, and a new strategy is needed to avert the risk of nuclear war.
- To support the Treaty of Prohibition of Nuclear Weapons and its ascension into international law.
- To write an article about our stance for medical newspapers and general media organisations.
- To work with relevant nuclear disarmament organisations.

Students for Global Health calls on governments:

- To sign the UN Treaty on the Prohibition of Nuclear Weapons.
- To dismantle nuclear arms and allow independent UN officials to verify this.
- To ban other countries nuclear weapons on their territories.
- To provide support to individuals affected by their own nuclear weapons use or testing.
- To encourage other countries to sign the Prohibition of Nuclear Weapons treaty.



**Burns:** Nagasaki bomb victim Sumiteru Taniguchi looks at a photo of himself taken in 1945. His horrific burns have required 17 operations. Credit: Yuriko Nakao

#### SUMITERU TANIGUCHI'S STORY

“As a 16-year-old boy, I was riding my bicycle down the street when the atomic bomb exploded 1.8 km away, scorching my back and leaving the skin on my right arm hanging down from the shoulder to the fingertips. Most of the people around me had no one to look after them, and passed away while begging for water. I spent two nights up in the mountainside before a rescue squad found me on the morning of the third day and took me to a first-aid station some 28 km away. I went from one aid station to another until I was finally released from Omura Naval Hospital in March 1949. I

suffered such awful pain during that time that I often called out ‘Please kill me!’ as I was being treated. Among the survivors of the atomic bombing, there are those who committed suicide and those who died after saying they couldn’t stand yet another operation. As someone who knows about this, I feel that I have a responsibility to live my life to the very end. Sometimes it’s a struggle. I’ll keep on fighting until all nuclear weapons are banished from this Earth. To everyone who is reading this, I beg you to think of yourselves as parents building a bright future for your descendants.”

#### References:

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